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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of: SAKASHITA et al.

Serial No.: 09/530,202

Group Art Unit: 3928

Filed: April 26, 2000

Examiner: K. Egwim

P.T.O. Confirmation No.: 3928

For: **PROCESSING AID FOR VINYL/CHLORIDE RESIN AND VINYL/CHLORIDE
RESIN COMPOSITION**

RESPONSE UNDER 37 C.F.R. §1.116
- EXPEDITED RESPONSE -
GROUP ART UNIT 3928

MAILSTOP AF

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

August 18, 2003

Sir:

In response to the Office Action dated May 20, 2003, Applicants present the following remarks.

Claims 1-4 are pending in the application. Claims 1-4 are rejected.

Claim Rejections - 35 U.S.C. §102/103

Claims 1-4 are rejected under 35 U.S.C. §102(b) as anticipated by or, in the alternative, 35 U.S.C. §103(a) as being unpatentable over Kishida et al., Tuzuki et al., Matsuba et al. (US or EP) or GB 1378434 for reasons cited in previous Office actions.

Applicants respectfully disagree with the rejection under 35 U.S.C. §102. Regarding the "at least 0.24" of Tuzuki et al. and the "at least 0.41" of Matsuba et al. compared with Applicants' claimed "at least 0.5", the Examiner asserts that "at least 0.24" encompasses 0.5 and any number > 0.5. Likewise, "at least 0.41" is interpreted as encompassing 0.41 and any number larger than 0.41, which includes 0.5 and any number > 0.5. The Examiner asserts that, if not anticipated, this is at least obviousness.

As noted previously, MPEP §2131.03 states that when the prior art discloses a range that overlaps the claimed range, but no specific examples falling within the claimed range are disclosed, a case-by-case determination must be made as to anticipation. The MPEP then indicates that as an example, ^{*}if the claims are directed to a narrow range, the reference teaches a broad range, and there is evidence of unexpected results within the claimed narrow range, depending on the other facts of the case, it may be reasonable to conclude that the narrow range is not disclosed with "sufficient specificity" to constitute anticipation of the claims. In light of the limited specific viscosity teachings of the cited references, the claimed range does not appear to be disclosed with sufficient specificity. Therefore, the cited references would not anticipate the claimed invention.

The Examiner asserts that the "sufficient specificity" requirement only applied when the prior art discloses a range that touches, overlaps, or is within the claimed range, and suggests that the present case is not in one of the listed groups because the claimed range is fully within the prior art range. However, Applicants note that there is no proscription against a situation in which the claimed range is fully within the prior art range. The prior art indeed discloses a range that overlaps the claimed range, in all of the claimed range.

With respect to the rejection under §103, the Examiner asserts that no unexpected results have been demonstrated for the claimed range because Applicant's example 17 (second step) falls outside this claimed range, and many comparative examples (i.e., comparative examples 1-8) fall within the claimed range. The Examiner asserts that the submitted declaration has been considered but it does not demonstrate unexpected results with regard to the viscosity, particularly in consideration of the above-cited comparative examples.

Applicants respectfully disagree with this conclusion, because unexpected results are clearly indicated in both the specification as disclosed as well as the Declaration filed with the Response on March 14, 2003. Moreover, the Examiner does not appear to compare the entirety of the Examples and Comparative Examples.

According to claim 1, the processing aid of the present invention is prepared by a two-step polymerization, and is characterized in that:

- the viscosity of the first-step polymer is at least 0.7 **and**
- the viscosity of the second-step polymer is at least 0.5.

The Examiner has indicated that the advantageous effects of the present invention have not been demonstrated because: evaluation results of Example 17 are excellent, in spite of the second-step polymer thereof not being within the claimed range; and the evaluation results of Comparative Examples 1 to 8 are poor, in spite of the polymers thereof being within the claimed range.

The specific viscosity of the second-step polymer of Example 17 is 0.63 as shown in Table 4 and fulfills a specific viscosity of at least 0.5, which is an element of Claim 1. Therefore, the examiner's assertion that "the second-step polymer of Example 17 is not within the claimed range"

are is incorrect. The evaluation results of Example 17 are excellent, as those of the other Examples, because the second-step polymer of Example 17 is within the claimed range.

As to the Examiner's assertion that Comparative Examples 1-8 fall within the claimed ranges for viscosity and, by exhibiting poor properties, therefore destroy a showing of unexpected results, Applicants note that while these comparative examples have viscosities in the claimed ranges, they do not include all the remaining limitations of the claims. In particular, Comparative Examples 1, 2, 3, 7 and 8 do not satisfy at least the claimed limitation that monomer mixture (A) comprises 51 to 100% by weight of methyl methacrylate. Comparative Examples 4, 5 and 6 do not appear to satisfy the claimed limitation of monomer mixture B containing 51 to 100% by weight of an acrylate ester or methacrylate ester except methyl methacrylate. All Comparative Examples 1-8 exhibit poor gelation, formability or transparency. Likewise, in the cited references, one or both of specific viscosities of first-step polymer and second-step polymer **is/are lower** than the claimed specific viscosities of the present invention, as Applicants noted in the previously submitted remarks and declaration.

Consequently, when the results of Example 17 and Comparative Examples 1 to 8 are investigated in consideration of the composition and the specific viscosity of the claimed range, the processing aid of the present invention is obviously advantageous compared to the polymer of the cited references, in view of gelation properties and foaming properties.

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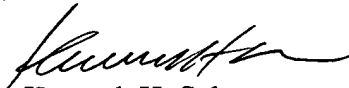
For at least the above reasons, Applicants submit that the claimed invention is patentably distinct from the cited references. Applicants request withdrawal of the rejections and passage of the claims to issue.

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees that may be due with respect to this paper to Deposit Account No. 01-2340.

Respectfully submitted,

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